

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD. AND
SAMSUNG ELECTRONICS AMERICA, INC.,
Petitioners

v.

MAXELL, LTD.,
Patent Owner

Inter Partes Review No. IPR2025-01314

U.S. Patent No. 8,180,198

**PETITIONERS' REPLY TO
PATENT OWNER'S RESPONSE**

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PETITIONERS' EXHIBIT LIST

Exhibit No.	Description
1001	U.S. Patent No. 8,180,198
1002	File History of U.S. Patent No. 8,180,198
1003	Declaration of Ben Bederson in Support of Petition for <i>Inter Partes</i> Review of U.S. Patent No. 8,180,198
1004	U.S. Patent No. 7,822,233 (“Nagaoka”)
1005	U.S. Patent No. 6,721,489 (“Benyamin”)
1006	U.S. Patent No. 8,024,757 (“Nara”)
1007	U.S. Patent Pub. No. 2003/0099460 (“Imada”)
1008	U.S. Patent Pub. No. 2001/0026287 (“Watanabe”)
1009	U.S. Patent No. 6,953,886 (“Looney”)
1010	U.S. Patent No. 7,624,337 (“Sull”)
1011	U.S. Patent Pub. No. 2005/0160458 (“Baumgartner”)
1012	U.S. Patent No. 7,275,063 (“Horn”)
1013	U.S. Patent Pub. No. 2006/0026636A (“Stark”)
1014	U.S. Patent Pub. No. 2004/0125705 (“Tsukahara”)
1015	U.S. Patent No. 7,779,097 (“Lamkin”)
1016	U.S. Patent Pub. No. 2001/0056434 (“Kaplan”)
1017	Kang H and Shneiderman B (2000), “Visualization methods for personal photo collections: browsing and searching in the PhotoFinder,” In IEEE International Conference on Multimedia and Expo.. Vol. 3, pp. 1539 -1542 vol.3. - https://ieeexplore.ieee.org/document/871061
1018	Paul Resnick and Hal R. Varian. 1997. Recommender systems. Commun. ACM 40, 3 (March 1997), 56–58. https://doi.org/10.1145/245108.245121
1019	Yagawa et al, The Digital Album: A Personal File-tainment System, 1996
1020	Shneiderman and Kang, Direct Annotation: A Drag-and-Drop Strategy for Labeling Photos, 2000
1021	Allan Kuchinsky et al, FotoFile: A Consumer Multimedia Organization and Retrieval System, 1999
1022	U.S. Patent No. 6,987,221 (“Platt”)
1023	Patent Owner Infringement Contentions Claim Chart
1024	Petitioner’s “Sotera plus” Stipulation.
1025	Complaint from <i>Maxell, Ltd. v. Samsung Elecs. Co.</i> , No. 5:23-cv-00092 (E.D. Tex. Sept. 7, 2023).

Exhibit No.	Description
1026	Order from <i>Maxell, Ltd. v. Samsung Elecs. Co.</i> , No. 5:23-cv-00092 (E.D. Tex. Mar. 21, 2025).
1027	Order from <i>Maxell, Ltd. v. Samsung Elecs. Co.</i> , No. 5:23-cv-00092 (E.D. Tex. Jul. 9, 2025).
1028	Order from <i>Maxell, Ltd. v. Samsung Elecs. Co.</i> , No. 5:23-cv-00092 (E.D. Tex. May 2, 2025) (public version).
1029	Order from <i>Maxell, Ltd. v. Samsung Elecs. Co.</i> , No. 5:23-cv-00092 (E.D. Tex. Sept. 18, 2025) (public version).
1030	Excerpts of the trial transcript from <i>Maxell, Ltd. v. Samsung Elecs. Co.</i> , No. 5:23-cv-00092 (E.D. Tex. May 22, 2025).
1031	Letter from Maxell to Samsung dated July 7, 2021.
1032	Email thread between Maxell and Samsung from July 2021 to January 2022.
1033	Letter from Maxell to Samsung dated December 29, 2021.
1034	IPR2024-00867, Paper 40 (Petitioner's Response to Patent Owner's Request for Authorization to File Materials from Related Matters).
1035	IPR2024-00717, Paper 33 (Order Denying Patent Owner's Request for Authorization to File Materials).
1036	IPR2024-00828, Paper 42 (Petitioner's Response to Patent Owner's Motion to Submit Supplemental Information).
1037	IPR2024-00828, Paper 47 (Petitioner's Sur-reply to Patent Owner's Motion to Submit Supplemental Information).
1038	IPR2024-00828, Paper 50 (Order Denying Patent Owner's Motion to Submit Supplemental Information).
1039	IPR2024-00735, Paper 41 (Petitioner's Opposition to Motion to Submit Supplemental Information).
1040	Patent Owner's infringement contentions cover pleading from <i>Maxell, Ltd. v. Samsung Elecs. Co.</i> , No. 5:25-cv-00052 (E.D. Tex.).
1041	Petitioner's Motion to Stay Pending <i>Inter Partes</i> Review from <i>Maxell, Ltd. v. Samsung Elecs. Co.</i> , No. 5:25-cv-00052 (E.D. Tex. Oct. 24, 2025).
1042	"Order Focusing Patent Claims and Prior Art" from <i>Maxell, Ltd. v. Samsung Elecs. Co.</i> , No. 5:25-cv-00052 (E.D. Tex. Aug. 18, 2025).
1043	Law360 article, "Stewart Says New Patent Policies Aim to Bring Stability," dated Sept. 8, 2025.

Exhibit No.	Description
1044	U.S. Patent Pub. No. 2002/0105541 (“Endou”)
1045	U.S. Patent Pub. No. 2001/0018858 (“Dweck”)
1046	Transcript of deposition of Ravin Balakrishnan

I. INTRODUCTION

Petitioners submit this reply to Patent Owner's Response (Paper 23) ("POR"). Patent Owner ("Maxell") rests its defense primarily on an unnecessary and overly narrow construction of "retrieve"/"retrieval" and the unfounded assertion that Nagaoka's facial-recognition-based similarity grouping cannot satisfy the claimed retrieval function. Maxell's other arguments about Nagaoka likewise fail. For Ground 6, Maxell ignores Watanabe's express disclosure of digital images, and these arguments likewise fail.

II. CLAIM CONSTRUCTION

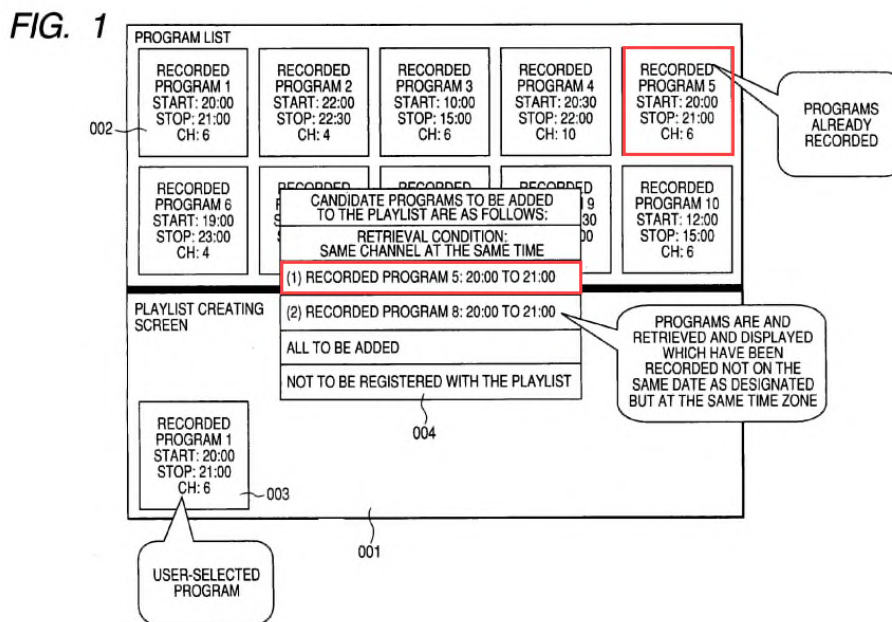
Maxell proposes that "retrieve"/"retrieval" means "to extract a subset of items from a set of stored items." POR, 12-14. No construction is necessary because the prior art invalidates the claims under any construction. To the extent the Board construes this term, Maxell's construction is overly narrow because the claims are not limited to "extracting" (*i.e.* removing or separating) the "other digital images" from a set. Nor are the claims limited to retrieval "from a set of stored items." Rather, the plain and ordinary meaning of "retrieve" is "to obtain an item by locating and returning it."

The claims use "retrieve" broadly. Claim 1 recites that the control module "retrieves other digital images" without any limitation defining where the "other digital images" are located or where they are retrieved from. EX1001, 24:55-57.

The claims do not require the retrieved “other digital images” to be stored in “a recording medium” (EX1046, 18:12-19:20) or be stored at all. Thus, contrary to Maxell’s narrow definition, the claims do not require the “other digital images” to be retrieved “from a set of stored items.”

The specification generally refers to retrieval from storage, but the patent does not limit the claims to retrieving “other digital images” from “a set of stored items.” EX1001, 4:15-19, 4:23-27, 5:56-61, 5:66-6:03, Fig. 1. Maxell’s proposed construction improperly imports an additional limitation not found in the claim language. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1323 (Fed. Cir. 2005) (en banc) (claims should not be construed to import limitations from the specification that are not present in the claim language).

Nothing in the claims or specification limits “retrieve” to “extracting” (*i.e.*, removing or separating) images “from a set of stored items.” EX2020, 81:13-22. The scope of the claims includes retrieval in any manner and from any location, such as retrieving images from a file or display. Maxell appears to argue that images that are “pre-identified” or “previously compiled and displayed” cannot be retrieved (POR, 18-19), but the ’198 patent in Figure 1 shows retrieving a program that had already been pre-identified, compiled, and displayed in the “program list” top-half portion of the display:



EX1001, Fig. 1; *see also* Fig. 5; EX1046, 27:15-29:18.

Claim 1 does not limit where the retrieved images are displayed, and therefore the retrieved images can be displayed anywhere on the display, such as at the top of “program list” in Figure 1. In other words, “retrieve” may include, for example, moving a program from one portion of the display to somewhere else on the display (such as the “retrieval results screen” in Figure 3) to identify that program as a candidate for the playlist. There would be good reason to do so, such as if a user has thousands of images on a display. Thus, “retrieve” in the ’198 patent may include sorting or organizing images where that process identifies images to add to a playlist, such as the operation in Nagaoka.

To the extent Maxell is arguing that “a subset” means fewer than all items must be extracted, this is incorrect. Both parties’ experts agree that “a subset” can

mean all. EX2020, 13:23-14:4, 81:13-22; EX1046, 99:9-19. Moreover, the plain meaning of “subset” is a broad term that can include the entire set, whereas “proper subset” is the term that is limited to less than all items in a set. *Amado v. Microsoft Corp.*, 2004 U.S. Dist. LEXIS 31222, at *10 (C.D. Cal. Aug. 20, 2004).

Additionally, Petitioners' construction of “retrieve” is consistent with Maxell's extrinsic evidence. *E.g.*, EX2018.

For the reasons explained in more detail below, Maxell is wrong about Nagaoka's operation. Nagaoka discloses extracting a subset of items from a set of stored items and thus meets the claims under Maxell's construction. But, even if Nagaoka is limited to “sorting” as Maxell argues, Nagaoka meets the claims because sorting images to identify candidates for a playlist is within the scope of the claims for the reasons above.

III. GROUND 1: NAGAOKA RENDERS OBVIOUS CLAIMS 1-4, 6, 9-11

A. Nagaoka Discloses Claim 6

Maxell argues that Nagaoka fails to disclose limitation [6pre] but does not explain why the preamble is allegedly limiting. POR, 19-22. Additionally, the disclosures in Nagaoka cited in the petition describe both an apparatus and a method of using the apparatus. EX1004, Abstract (“the present invention is

directed to a method and an apparatus”); 3:53-54 (Fig. 2 “may be performed...”).

Thus, Nagaoka discloses both claims 1 and 6.

Maxell also argues throughout the POR that Petitioners reuse their claim 1 arguments for claim 6. *See* POR, 29, 34, 35-36, 37. This argument ignores that Claim 6’s method steps are substantively coextensive with claim 1’s structural limitations. Specifically, the claims use different terms to refer to the same concepts. For example, Maxell’s expert testified that claim 6’s “associated information” is “very similar” to claim 1’s “related information,” and that “a reasonable interpretation” is that these terms “refer to the same thing.” EX1046, 44:10-45:11. Thus, both “associated information” and “related information” are met by the displayed “similar to: Momoko” and the disclosures cited in the petition for claim 1. Similarly, “image data” in claim 6 and “digital image” are similar terms both met by the cited disclosures in Nagaoka, which discloses “digital image data representing a photograph.” EX1004, 3:16-17; EX1046, 38:10-18. And a “program list” is a list of digital images, which is substantively identical to the “plurality of digital images” in claim 1 and disclosed on Nagaoka’s display. EX1046, 46:19-47:5; EX1004, Figs. 6. Thus, each step of claim 6 corresponds to a function performed by the same disclosure in Nagaoka.

Additionally, claim 6 is broader in that it does not require a “control module” or any other specific hardware structure. Rather, it simply recites the

functional steps of receiving a selection, retrieving associated image data, and outputting a list, each of which Nagaoka's disclosed method performs regardless of which component carries out the step. The same is true of claim 13, which recites substantially the same selection-and-retrieval steps as claim 6, differing only in that the resulting list is used for "dubbing" rather than general playlist creation.

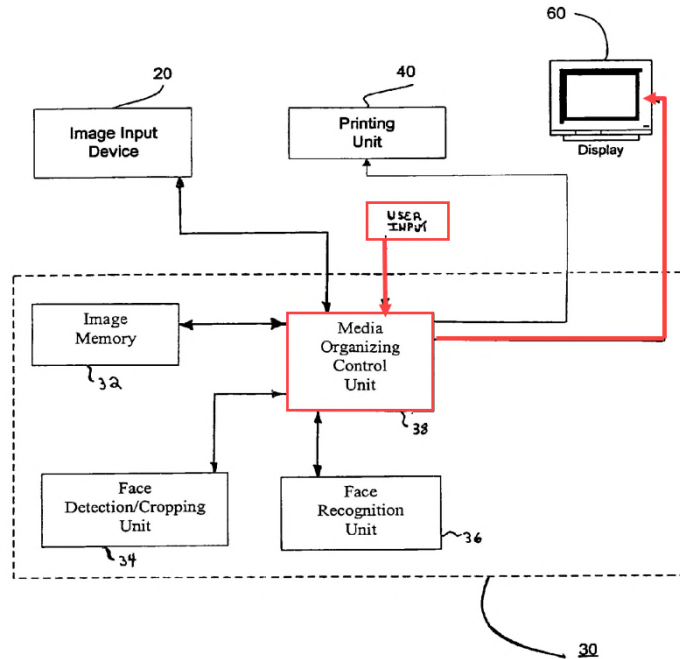
For these reasons, *Cook Group* is distinguishable. POR, 20-21. There, the Board denied institution based on the sufficiency of the evidentiary showing, not on any categorical rule that device-claim analysis can never be used for a corresponding method claim. *Cook Group Inc. v. Boston Scientific Scimed, Inc.*, IPR2017-00131, Paper 13 at 14-15 (P.T.A.B. May 15, 2017). Here, Petitioners' element-by-element mapping for claim 1 is applicable to the mapping for claim 6 because of the substantive overlap between claims 1 and 6 as discussed above.

B. Nagaoka Discloses Limitations [1b]/[6b]

1. Nagaoka Discloses A Control Module That Selects An Image To Add To A Playlist

Maxell asserts that Nagaoka does not disclose limitations [1b]/[6b], arguing that the "control module" does not "select[] a digital image" because the digital images in Nagaoka are selected by the user, not a control module. POR, 22. Maxell is wrong. In Nagaoka, after the user drags and drops the image into the "display window portion 408," the control module (*i.e.*, "the media organizing control unit 38" or the facial recognition software) selects the image to add to the folder (*i.e.*,

the playlist). EX1004, 5:23-29; 3:58-60 (the GUI is “output by the media organizing control unit 38 to the display 60.”). This is demonstrated by Figure 2, which shows that a user input is sent directly to the control module and then sent to the display:

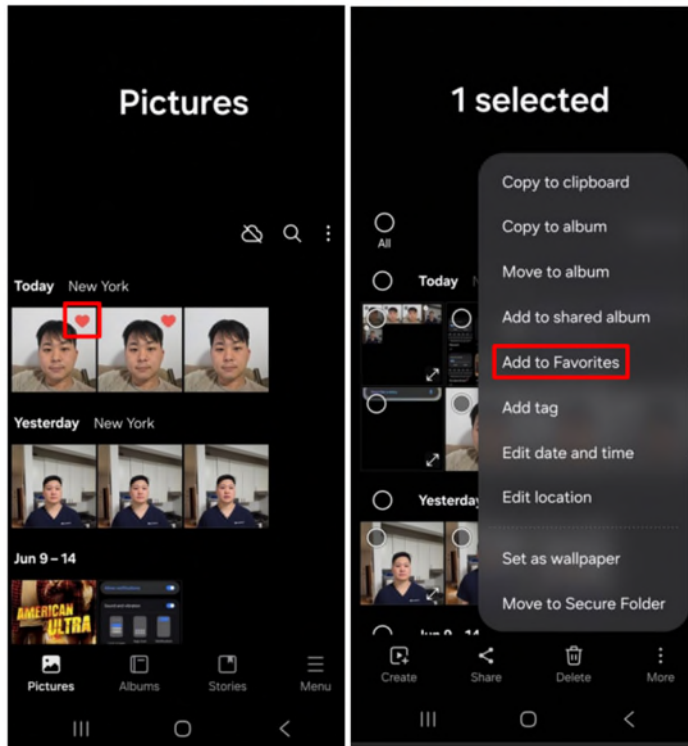


EX1004, Fig. 2 (annotated), 3:61-67. As shown in Figure 2, the image selection by the user via drag and drop cannot reach the display without control by the media organizing control unit (*i.e.*, control module). See EX1046, 60:15-18. Because the GUI is “output by the media organizing control unit 38 to the display 60” (EX1004, 3:58-60), the control module selects the image to add to the playlist by sending the image to the display window portion 408 as indicated by the user (EX1004, 5:23-29, Fig. 4). See also EX2020, 45:12-23 (“first the user selects and then there is a control module of Nagaoka, which selects digital images to be

displayed”), 47:7-19, 53:24-55:3, 56:4-12, 64:15-24; EX1003, ¶109. The images that the control module selects to add to the playlist may also be the updated images added to display window portion 406. EX2020, 62:11-63:7 (the control module or algorithm “runs in a loop to respond to the user interaction to add photos to the list of photo faces in Box 406”).

Petitioners' reading is within the scope of the claims. There is no requirement that the control module selection occur before the user selection as Maxell appears to argue. POR, 25-26; EX2020, 21:21-22:5. Rather, the control module selection may occur in response to a user selection. *See* EX1046, 15:20-16:17 (agreeing that the image selected by the control module and the image selected by the user can be the same image); EX2020, 19:18-20:3 (“This limitation does not provide any restrictions on what the control module might respond to or in what situations the control module performs”). Indeed, Maxell's infringement contentions recite that “when a user taps the heart icon on a photo or selects ‘Add to Favorites’ from a menu” (*i.e.*, a user selection), “the control module selects that image to add to the ‘Favorites’ playlist based on that user command.”

Fourth, when a user taps the heart icon on a photo or selects “Add to Favorites” from a menu, the control module selects that image to add to the “Favorites” playlist based on that user command.



EX1023, 104.

Additionally, limitation [6b] does not require “a control module” and thus it is unclear how Maxell’s argument applies to limitation [6b], if at all. And as discussed above in Section III.A, “associated information” is met by the disclosure of “related information,” and a “program list” is met by the disclosure of “a plurality of digital images.” Section III.A.

2. Nagaoka Discloses A Playlist

Maxell argues that Nagaoka does not use the word “playlist,” but an obviousness analysis does not require that the prior art use the identical terminology used in the challenged claims. A “playlist” within the scope of the

'198 patent includes a collection of images. *See, e.g.*, EX1001, Fig. 1; EX1046, 35:12-36:5. This is what is disclosed in Nagaoka: a collection of selected images that will form an album, functioning as both a comparison model for the facial recognition algorithm and a person folder associated with a particular person. EX1004, 5:18-56, Fig. 6; EX1046, 89:7-11; EX2020, 66:7-67:4, 68:16-20 (“person folders can be used in support of facial recognition, but that’s not the only purpose and only disclosure of Nagaoka.”).

Maxell’s argument is also inconsistent with its infringement contentions, where the accused “playlist” is a collection of images allegedly retrieved and selected based on facial recognition that will form an album. *E.g.*, EX1023, 179 (“The playlist is effectively the entire collection of 28 items, which will form the album once the user registers the person.”).

Thus, Nagaoka discloses limitation [1b], and limitation [6b] is met for the same reasons and for the reasons discussed in Section III.A.

C. Nagaoka Discloses Limitations [1c.i]/[6c]/[6d]

1. Nagaoka Discloses Retrieving “Other Digital Images”

As discussed in Section II above, Maxell’s construction of “retrieve” is “to extract a subset of items from a set of stored items.” Petitioners’ construction is “to obtain an item by locating and returning it.” Petitioners’ construction is consistent with the intrinsic and extrinsic evidence and therefore correct for the reasons

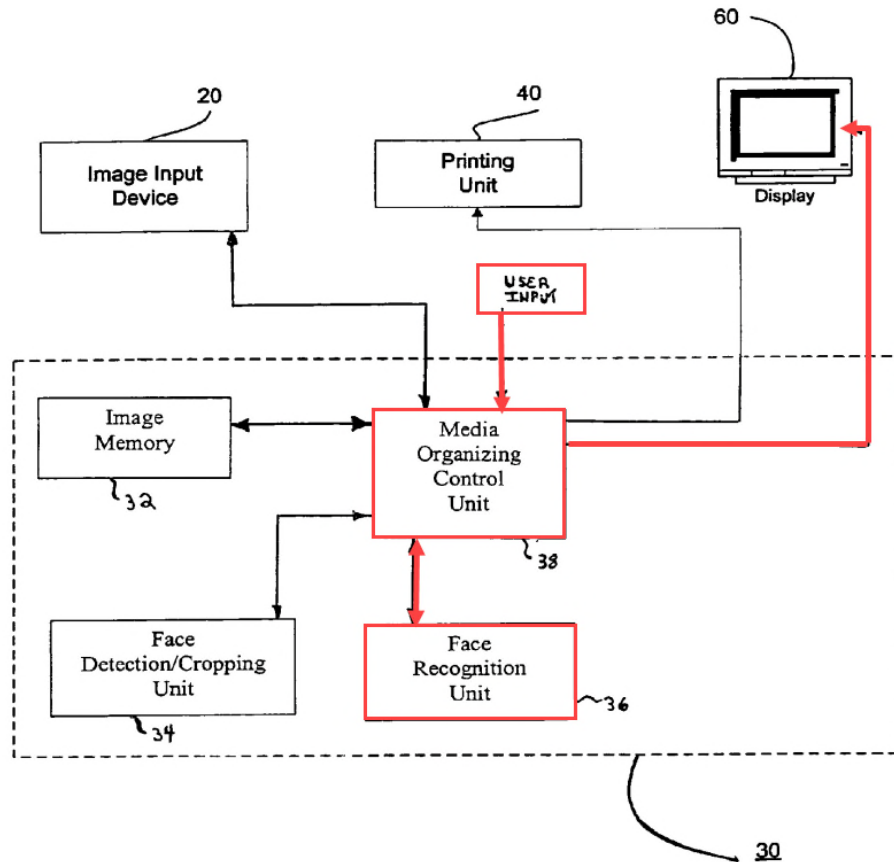
above. But, as discussed, it is not necessary for the Board to construe “retrieve” because the prior art meets the claims under any construction.

Maxell argues that Nagaoka does not disclose “retriev[ing] other digital images” because Nagaoka only discloses organizing or sorting digital images, implying that Nagaoka sorts images directly on the display. Maxell is incorrect. Rather, after the user selects an image by dragging and dropping, the face recognition unit 36 applies facial recognition to the face images. EX1004, 5:25-29. Then, the media organizing control unit 38 retrieves the face images from the face recognition unit, sorts the face images by similarity to a selected image, and then outputs the images to the display. EX1004, 5:43-49.

Nagaoka discloses that a user may “create a new person folder” which is initially empty and “must contain at least one face image” to serve as a basis for facial recognition. EX1004, 5:18-22; EX1046, 67:21-68:5. Thereafter, the user “may drag and drop any of the faces from an ‘unknown’ display window portion 406” to “model display window portion 408,” which is a user selection. EX1004, 5:22-25; EX1046, 68:20-22. Nagaoka then states that “[o]nce the user has selected the person folder for matching with ‘unknown’ faces (which serves as a comparison model), the face recognition unit 36 applies face recognition to determine similarity of unknown faces to the selected model (S218).” EX1004, 5:25-29. A POSITA would have understood that the media organizing control unit

38 could send the face images to the face recognition unit 36 for the face recognition unit 36 to apply facial recognition to the face images. EX1046, 70:4-12, 72:14-73:2, 78:4-13, 78:18-21, 80:16-81:2; EX2020, 72:13-74:11; EX1004, Fig. 2. Petitioners' expert testified that a POSITA reading Nagaoka "would unequivocally understand that 406 needs to retrieve the unknown photos to display them in 406, otherwise that could never occur." EX2020, 86:16-87:18.

As shown in Figure 2, once facial recognition is applied to the face images in the face recognition unit 36, the media organizing control unit then retrieves the face images and the similarity measure (*e.g.*, "Similar to: *Momoko*") from the face recognition unit 36, which then sorts the face images and outputs the sorted images to the unknown display window portion 406:



EX1004, Fig. 2 (annotated), 5:43-49 (“After the face recognition unit 36 obtains a similarity measure for each unknown face, the media organizing control unit 38 sorts the unknown faces by similarity measure (most similar to least similar) and outputs an updated ‘unknown’ display window portion 406 (FIG. 6) showing the unknown faces in sorted order (S220).”); EX1046, 81:16-82:7; EX2020, 73:14-74:11. Thus, Nagaoka does not disclose simply sorting images on a display; rather, it discloses retrieving images, sorting them, and outputting them to a display. See *also* EX2020, 78:6-79:6 (images on the display window 406 do not remain the same after user drag and drop).

The media organizing control unit may also retrieve images from image memory and the similarity measure (*e.g.*, “similar to: *Momoko*”) from the face recognition unit 36, which are then output to the display. EX1004, Figs. 2, 6, 3:45-49 (image memory 32 “stores digital image data”); EX1046, 53:21-54:17 (agreeing that “the media organizing control unit” could “obtain[] digital images from image memory and send[] them to the display.”), 59:9-60:17. Maxell is incorrect that the “similarity measure” needs to be recorded in a recording medium (POR, 30); rather, the “said digital images” are “recorded in a recording medium.” However, Nagaoka discloses a similarity measure (*e.g.*, “similar to Momoko”) in the face recognition unit 36 because that is where face recognition is applied. EX1004, 5:25-29.

In other words, Maxell is incorrect that Nagaoka merely discloses “sorting” digital images directly on a display. Rather, Nagaoka discloses the media organizing control unit 38 (*i.e.*, the control module) retrieving the face images from the face recognition unit 36 or image memory and the similarity measure (*i.e.*, “similar to: *Momoko*”) from the face recognition unit. EX1004, 5:43-56. Maxell argues that Nagaoka only pre-identifies and displays face images in display window portion 406, but this display exists before the user selection. EX1046, 88:2-6. After the user drags and drops a selected face image, the face recognition

unit applies facial recognition to the face images, and the media organizing control unit retrieves the face images and outputs them to the display.

Additionally, the mere fact that Nagaoka's face images are pre-identified and displayed in Nagaoka's unknown window display 406 does not preclude the images being retrieved to output an updated display. Indeed, the '198 patent contemplates this same operation. Figure 1 of the '198 patent depicts the recording medium's program list being repeatedly consulted and retrieved from as the user's playlist selections change, even though the programs in that list were already being displayed to the user. EX1001, Fig. 1, 4:15-19.

Moreover, as discussed above in Section II, even if Nagaoka sorts images directly on a display, this operation meets the claims because it identifies candidates for a playlist. See EX1001, Fig. 1, 4:15-19. Thus, Nagaoka's operation meets the claims under either party's construction because Nagaoka discloses extracting a subset of items (*i.e.*, media organizing control unit extracting face images) from a set of stored items (*i.e.*, face images stored in the face recognition unit 36).

2. Nagaoka Discloses Related Information That Is The "Same" Related Information

Maxell argues that a "similarity measure" is not the "same" related information. POR, 30-35. But Nagaoka discloses retrieving digital images that are "similar to" a selected face image. Thus, the retrieved images have the same

related information in that they are “similar to” the same selected face image, *e.g.*,

“similar to: *Momoko*” in Fig. 6:

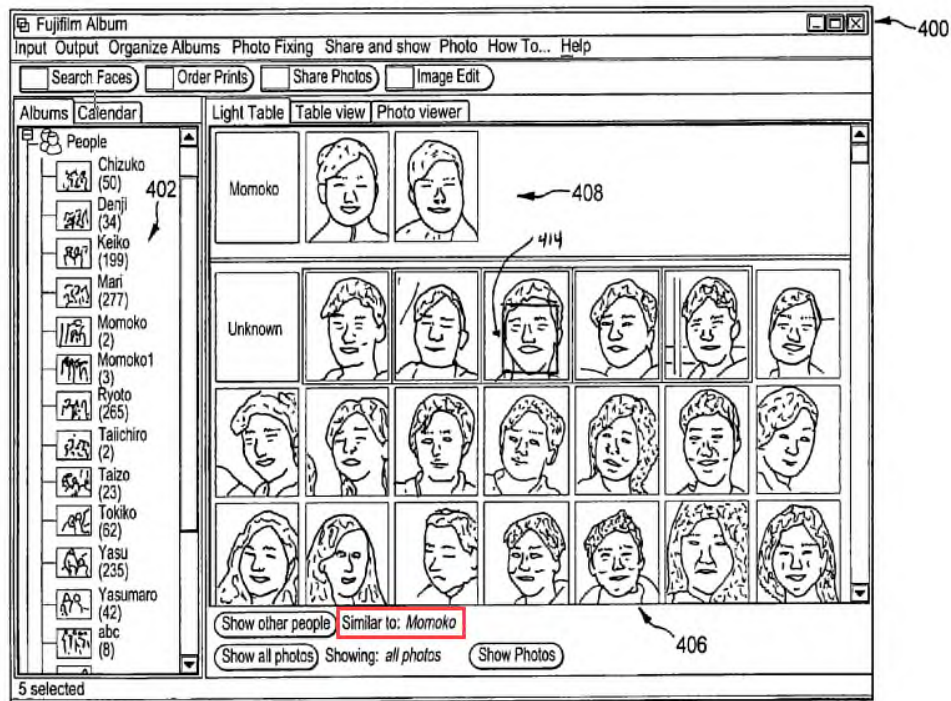


FIG.6

EX1004, Fig. 6 (annotated). As shown in Fig. 6, the digital images displayed in 406 share the same related information: a facial-recognition-based similarity classification to the selected model image of Momoko, displayed as “similar to: *Momoko*.” EX1004, Fig. 6, 5:8-11; *see also* EX1003, ¶104; EX2020, 83:3-10, 84:9-85:11. In other words, even if the images have a different degree of similarity, the images are retrieved based on the related information that the images are similar to the selected image (*i.e.*, “Similar to Momoko” displayed in Fig. 6). The “iterative loop” as Maxell describes it (POR, 32-33) may change the degree of

similarity for a face image, but it does not change that an image is “similar to” a selected image.

Nagaoka's disclosure further includes a “Show other people” button that, if selected, displays other photos with the same related information: “other people similar to Momoko.” EX1004, Fig. 6; EX1046, 84:7-22. Fig. 6 further includes a “Show all photos” button that, if selected, “shows all persons including people other than Momoko.” EX1004, Fig. 6; EX1046, 85:1-5; EX2020, 73:14-74:11, 82:23-83:19. Thus, Maxell is incorrect that “no faces are excluded or retrieved as specific candidates.” POR, 32. Even if true, the claims do not preclude a situation where digital images with the “same” related information are retrieved alongside digital images without the “same” related information.

Additionally, Maxell's argument that a similarity measure is different from “same” related information is inconsistent with Maxell's infringement contentions, which allege retrieval based on facial similarity. *E.g.*, EX1023, 119-20 (retrieval based on “unique facial signature”), 152 (digital images retrieved “based on facial recognition”). Maxell also alleges in its infringement contentions “to the extent that Samsung argues that the related information for a retrieved candidate image is not exactly the ‘same’ as the user-selected image, the use of algorithmic similarity is an equivalent implementation.” EX1023, 150-151.

Maxell further argues that Nagaoka provides no disclosure that the similarity measure is “recorded in said recording medium.” POR, 28-29. But the claims require only that the “related information” is the same, not that it be stored in any particular manner. Nagaoka stores digital images and their associated metadata (including person identification derived from facial recognition) in its media storage system. EX1004, 3:61-67, Fig. 2. In particular, facial recognition data is stored in the face recognition unit 36. EX1003, ¶114.

Thus, Nagaoka meets limitation [1c.i], and limitations [6c] and [6d] are met for the same reasons and for the reasons discussed above in Section III.A.

D. Nagaoka Discloses Limitation [1c.ii]/[6e]

For limitations [1c.ii]/[6e], Maxell relies on the arguments for limitations [1c.i]/[6c]/[6d] addressed in Section III.C above. POR, 35-36. Thus, Maxell’s arguments fail for the reasons discussed above. Limitation [6e] is met for the reasons discussed in Section III.A.

E. Nagaoka Discloses Limitations [1c.iii]/[1c.iv]/[6f]/[6g]

For limitations [1c.iii]/[1c.iv]/[6f]/[6g], Maxell relies on the arguments for limitations [1c.i]/[6c]/[6d] addressed in Section III.C above. POR, 35-36. Thus, Maxell’s arguments fail for the reasons discussed above. Limitations [6f]/[6g] are met for the reasons discussed in Section III.A.

F. Nagaoka Discloses Dependent Claims 2-4, 9-11

For claims 2-4, 9-11, Maxell relies on its arguments on claim 1. POR, 38-39. Thus, these claims are met for the reasons discussed above. Maxell also ignores that claims 3, 10, and 11 are substantively coextensive with claim 2.

IV. GROUND 2: NAGAOKA + BENYAMIN RENDERS OBVIOUS CLAIMS 5, 12

For Ground 2, Maxell relies on its arguments for Ground 1. POR, 39-40. Thus, Maxell's arguments fail for the reasons discussed above.

V. GROUND 3: NAGAOKA + NARA RENDERS OBVIOUS CLAIMS 7, 13

A. Motivation to Combine Nagaoka And Nara

A POSITA would have been motivated to combine Nagaoka and Nara for the reasons stated in the petition (Pet., 70-71). Maxell argues that Nagaoka and Nara are non-analogous "because they are two different systems directed at solving different problems" (POR, 40-42), but the legal test for whether prior art references are analogous involves comparing the prior art to the patent at issue, not comparing prior references to each other. *In re Bigio*, 381 F.3d 1320, 1325-26 (Fed. Cir. 2004).

Additionally, both Nagaoka and Nara are analogous to the '198 patent for the reasons explained in the Petition. Pet., 70-71. Both references, like the '198 patent, are directed to systems and methods for organizing, selecting, and managing digital content recorded on a recording medium for later playback or

transfer, which is the same field of endeavor as the '198 patent's digital image recording and reproducing apparatus. EX1001, Abstract; EX1004, Abstract; EX1006, Abstract; EX2020, 112:2-22, 113:25-115:23.

Maxell's argument also ignores that obviousness is not a rigid test. Rather, the question is whether a POSITA would have had reason to combine the references, not whether both references independently disclose the same features. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 416-17 (2007) (motivation may arise from "combining familiar elements according to known methods" or "applying a known technique to a piece of art ready for improvement"). Maxell's characterization of the references as addressing entirely different "problems" ignores that *KSR* does not require a single unifying problem. 550 U.S. at 420; *see also In re Heck*, 699 F.2d 1331, 1332-33 (Fed. Cir. 1983) ("The use of patents as references is not limited to what the patentees describe as their own inventions or to the problems with which they are concerned. They are part of the literature of the art, relevant for all they contain.").

Maxell further argues that a POSITA would not have been motivated to modify Nagaoka's facial recognition system to integrate Nara's back-up capabilities from one medium to another. But, as discussed in the Petition, "back-up capabilities from one medium to another" (*i.e.*, "dubbing") is not required in claim 13. Pet., 72-73. Rather, both parties' experts agree that claim 13 requires

only creating a “dubbing list,” not the actual process of dubbing. *Id.*; EX1046, 47:22-48:5 (agreeing that claim 13 requires creating the dubbing list but not “the actual process of dubbing”); EX2020, 118:18-22. To the extent dubbing is a requirement, a POSITA would have been motivated to combine Nagaoka and Nara for the reasons stated in the Petition and explained by Petitioners’ expert. Pet., 70-71; EX2020, 118:22-120:17, 123:5-124:7.

B. Nagaoka and Nara Disclose Claim 13

For claim 13, Maxell relies almost entirely on its retrieval arguments (*see* Section III.C above) and its motivation-to-combine challenge (*see* Section V.A above). POR, 42-43. These arguments fail for the reasons above.

Maxell also argues that Petitioners improperly rely on claims 1 and 6. This ignores that claim 13’s dubbing-list-creating method recites the same sequence of steps as claim 6’s playlist-creating method. The difference is that claim 13’s resulting list functions as a “dubbing” list rather than general playlist creation. This is a distinction in end use of the list, not in the retrieval and selection functionality at issue. To the extent this “dubbing” end-use function is limiting, Nara’s disclosure of automatically arranging and transferring content from one recording medium to another maps directly onto claim 13’s dubbing-list limitation for the reasons discussed in the Petition. Pet., 72-73.

**VI. GROUND 4: NAGAOKA + NARA + BENYAMIN + IMADA
RENDERS OBVIOUS CLAIMS 14-15**

Maxell's relies on its arguments for claim 13. These arguments fail for the reasons above. POR, 44-46.

Maxell is also incorrect that the combination of Nagaoka, Nara, Benjamin, and Imada is impermissible hindsight for the reasons stated in the Petition. Pet., 75-76. Each of these references, like the '198 patent, addresses the organization, selection, or management of digital content recorded on or transferred between recording media—the same field of endeavor as the '198 patent. EX1001, Abstract; EX1004, Abstract; EX1006, Abstract; EX1005, 1:62-2:05; EX1007, ¶0008; EX2020, 130:2-9, 130:14-20, 131:9-17, 132:7-133:6. Each reference is also reasonably pertinent to at least one problem that the '198 patent addresses: effectively managing content. EX2020, 134:16-19 (“all four references do address issues of improving managing content using a recording digital media.”).

Maxell's argument ignores the specific claim limitation that each reference provides, and instead cherry picks alleged differences between the references while ignoring each reference as a whole. Each reference contributes a specific limitation to Nagaoka's base system: (a) Imada contributes bit-rate/capacity management functionality for recording operations (EX1007, ¶0008); (b) Nara contributes dubbing/backup recording onto secondary media (EX1006, 1:52-56); and (c) Benjamin contributes selection-menu/telop interfaces for content management

(EX1005, Abstract, 15:57-60). Each improvement is compatible with, and predictable in, its application to Nagaoka's media management platform. EX1003, ¶¶156-162.

Additionally, as discussed, the Supreme Court rejected the rigid requirement that prior art references must address the same problem to support a motivation to combine. *KSR*, 550 U.S. at 420. Thus, Maxell's arguments fail.

VII. GROUND 5: NAGAOKA + NARA + BENYAMIN RENDERS OBVIOUS CLAIMS 8 AND 16

For Ground 5, Maxell relies on its arguments for claims 6 and 13 and Ground 4. These arguments fail for the reasons above. POR, 46-48.

VIII. GROUND 6: WATANABE + LOONEY + PLATT + KAPLAN RENDERS OBVIOUS CLAIMS 1-16

A. Watanabe Discloses Limitations [1pre]/[1a]/[1b] and [6pre]/[6a]/[13a]

Maxell argues that Watanabe's disclosed embodiments do not include digital images (POR, 49-53), but Watanabe expressly discloses that the content managed by Watanabe's system "may include image data." EX1008, ¶47, Fig. 13 (music note icons). This is an explicit disclosure of the system's capability to handle image data. EX2020, 137:22-139:13.

Watanabe's library list display section 87 (EX1008, ¶¶115-119) provides the requisite structural framework for organizing and displaying content, including image data, regardless of whether the specific example emphasized in certain

paragraphs focuses on music. A POSITA reading Watanabe would have understood that the disclosed organizational structure applies to all content types the system handles, including image data. EX2020, 138:16-139:10.

This conclusion is reinforced by Watanabe's express statement that its content-management system extends beyond music: Watanabe discloses that "image data of movies ... (moving images) can be recorded and reproduced," confirming that the system's architecture, including its library list display and retrieval-condition functionality, was designed to accommodate image, audio, and other forms of content. EX1008, ¶0167. A reference's disclosure is not limited to its preferred or primary embodiment; rather, the reference's disclosure is evaluated for everything a POSITA would understand it to teach. *Heck*, 699 F.2d at 1332-33.

Moreover, it would have been obvious to incorporate digital image data into Watanabe's disclosed functionalities, such as with thumbnails. EX2020, 140:14-141:18. For example, the music icons in Fig. 13 (which are themselves digital images) could be replaced with album covers. The images are then associated with existing metadata already in Watanabe, such as artist name, song title, etc. Maxell is therefore incorrect that incorporating digital images into Watanabe would require "substituting image data for audio data" by "fundamentally redesigning the system," "replacing manual library browsing," or "introducing" a "new class of sub-information." POR, 52.

Thus, Watanabe discloses limitations [1pre]/[1a]/[1b], and limitations [6pre]/[6a]/[13a] are disclosed for the same reasons and the reasons discussed above. Sections III.A, V.B.

B. Watanabe Discloses Limitations [1c.i]/[6c]/[6d]/[13b]-[13d]

Maxell argues that Watanabe does not disclose user selection of a digital image triggering retrieval of images with the same related information. POR, 53-58. But Watanabe discloses a “retrieval condition setting section 81” that is “capable of retrieval from an artist, an album and a play list.” EX1008, ¶[0119]. The user can select a song such as “SONG TITLE 1” that displays Artist “A. A”. The user can then select artists “A.A” in menu 82 to filter the chart (87) to display only artists “A.A.”

As discussed, the music note icons in Fig. 13 are themselves digital images. Watanabe allows a user to select a music icon by selecting “retrieval condition 81” and then retrieving other music note icons with the same related information as the selected icon:

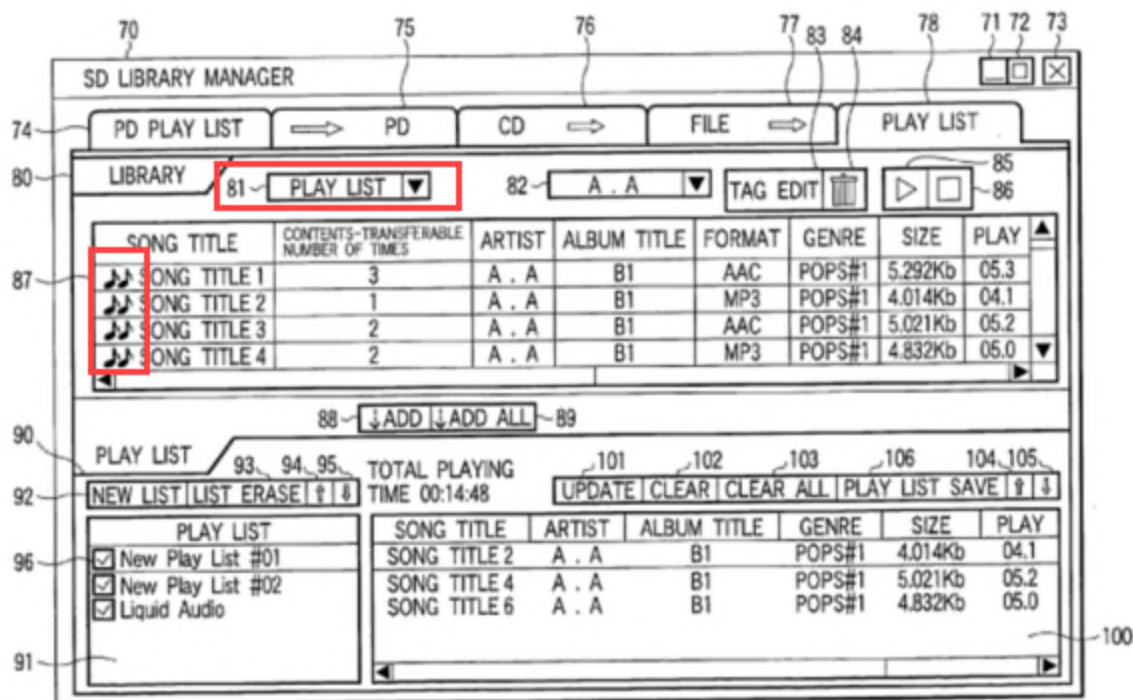


FIG. 13

EX1008, Fig. 13 (annotated). For example, the user may select a music icon by selecting a retrieval artist (“A.A.”) or album title (“B1”) associated with a music icon. EX1008, ¶[0119]. Thereafter, Watanabe’s system will retrieve all music icons with the same artist (*i.e.*, the same related information). To the extent Maxell argues that all icons are the same image, this is not relevant because the claims do not require that each retrieved digital image be different from the selected digital image; the claims simply require retrieving “other digital images” with the same related information. And, as discussed, it would have been obvious to replace Watanabe’s icons with other digital images, such as album covers associated with artists and song titles.

Thus, Watanabe discloses limitation [1c.i], and limitations [6c]/[6d]/[13b]-[13d] are disclosed for the same reasons and the reasons discussed above. Sections III.A, V.B.

C. Watanabe Discloses Limitations [1c.ii]-[1c.iv]/[6e]-[6g]/[13e]-[13g]

For limitations [1c.ii]-[1c.iv]/[6e]-[6g]/[13e]-[13g], Maxell relies on its arguments above. POR, 54-55. Thus, these arguments fail for the same reasons as above. *See* Sections III.A, V.B, VIII.A-B.

D. Watanabe Discloses Claims 2-3, 10-12

Maxell's arguments regarding these dependent claims are derivative of its challenges to the independent claim limitations above. POR, 60-61. Thus, these arguments fail for the same reasons as above. *See* Sections III.A, V.B, VIII.A-B.

E. Watanabe Discloses Claim 4

Maxell challenges the Kaplan combination on the same grounds as its arguments regarding the independent claims, and these arguments fail for the same reasons. POR, 62-64.

Maxell also argues that a POSITA would not have been motivated to combine Kaplan and Watanabe because "none of Kaplan's alleged benefits raised by Petitioners relate to or solve any problem identified in Watanabe." POR, 62. But, as discussed above, the obviousness analysis does not require prior art references to disclose the same problem. Here, Petitioners rely on Kaplan for its disclosure of thumbnail images, "which are small image representations of larger

images or content.” EX1016, ¶5. A POSITA would have been motivated to combine Watanabe with Kaplan for the reasons in the Petition. Pet., 78-81 (citing EX1016, ¶1). Additionally, Dr. Bederson testified Kaplan relates to the same general subject matter as Watanabe, Looney, and Platt. EX1003, ¶167; EX2020, 137:3-9, 140:14-141:18 (explaining why it would be obvious to incorporate thumbnails into Watanabe).

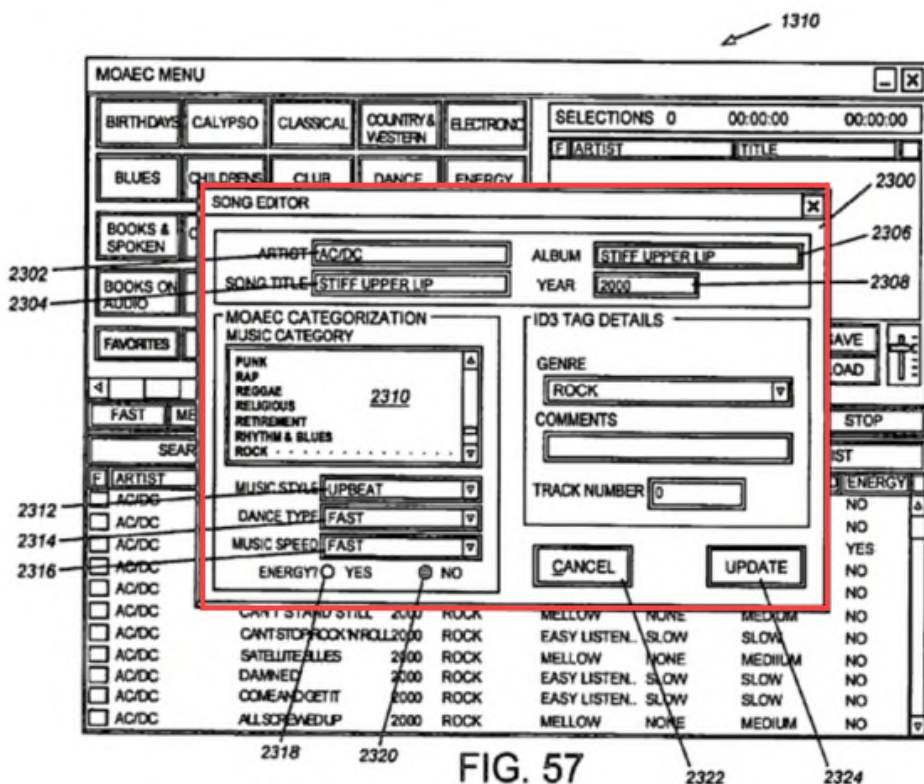
F. Watanabe Discloses Claims 7-9

Maxell's arguments regarding claims 7-9 are derivative of its challenge to the “digital image” and retrieval limitations addressed above. POR, 64-65. For the same reasons, these claims are rendered obvious. *See* Sections III.A, V.B, VIII.A-B.

G. Watanabe Discloses Claims 5, 16

Maxell's arguments relying on its challenges to the independent claims fail for the same reasons above. *See* Sections III.A, V.B, VIII.A-B.

Maxell also argues that Looney does not disclose a “telop” in claims 5 and 16. POR, 65-67. But Looney's Figure 57 discloses a selection-menu display that functions as the equivalent of a telop: an on-screen text/graphical overlay providing information about displayed content and enabling user selection. EX1009, Fig. 57; EX1003, ¶167.



EX1009, Fig. 57 (annotated).

The term “telop” as used in the ’198 patent refers to “a telop displayed on a display screen (*i.e.*, a small frame displayed on a display screen in piles),” where “in piles” means “layered or stacked on top of other screen elements.” EX1001, 2:45-47; EX1046, 37:6-16. Looney’s selection-menu display satisfies this function by providing on-screen text identifying content and enabling user interaction. Benjamin discloses a telop for the same reason, and the motivation to include such telop-equivalent functionality derives from the well-known use of on-screen selection prompts and informational overlays in digital media management systems. EX1003, ¶167; Pet., 89-90. Petitioners’ expert testified that it is

“extremely well known” to add a telop to a GUI and a POSITA would have been aware of the “trade-off between use of screen space and speed for user to accomplish a task.” EX2020, 106:3-108:21.

H. Watanabe Discloses Claim 14

Maxell's challenge to claim 14 relies on its arguments addressed above. POR, 67. For the same reasons, this claim is rendered obvious. *See* Sections III.A, V.B, VIII.A-B.

I. Watanabe Discloses Claim 15

Maxell argues that Watanabe's bit rate select section 151 (EX1008, ¶0146) is not tied to recordable capacity of the destination medium. POR, 68-69. But, in the context of Watanabe's disclosure of recording and reproducing image and other contents, a POSITA would have found it obvious to select a bit rate based on the destination medium's recordable capacity as a well-known, predictable design choice in digital dubbing systems. Selecting a bit rate to ensure content fits on the destination medium is a fundamental engineering consideration that does not require inventive insight. EX1003, ¶205.

IX. CONCLUSION

For the foregoing reasons, Petitioners submit that claims 1-16 are unpatentable.

Date: July 31, 2026

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CERTIFICATION UNDER 37 CFR § 42.24

Under the provisions of 37 CFR § 42.24(d), the undersigned hereby certifies that the applicable word count for the foregoing Reply to Patent Owner's Response totals approximately 5,593 as calculated by Microsoft Word, which is less than the 5,600 allowed under 37 CFR § 42.24.

Date: July 31, 2026

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CERTIFICATE OF SERVICE

The undersigned certifies pursuant to 37 C.F.R. §§ 42.6(e) and 42.105 that on July 31, 2026, a true and correct copy of the foregoing document was served by emailing (with consent) a copy to the following attorneys for the Patent Owner:

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